

IN THE CLAIMS

1. (currently amended) A method for producing a stably transformed chimeric dicotyledonous plant having transgenic root tissue, the method comprising the steps of:

obtaining a stem or hypocotyl explant from a selected dicotyledonous plant species, wherein the hypocotyl explant has a cut end below the cotyledon;

transforming the stem or hypocotyl explant with *Agrobacterium rhizogenes* containing an exogenous nucleic acid sequence capable of being transferred to the explant, wherein the cut end of the hypocotyl explant is contacted with the *Agrobacterium rhizogenes*;

culturing the transformed explant in a root initiating media to produce transformed roots; and

transferring the transformed roots to soil or a hydroponic environment to produce the chimeric dicotyledonous plant having transformed roots and wild type shoots, stems and leaves,

wherein the dicotyledonous plant is soybean, ~~potato, cotton or tomato~~.

2-4. (canceled)

5. (canceled)

6-7. (canceled)

8. (previously presented) The method of claim 1, wherein transformed roots are initiated in the hypocotyl by placing the end of the hypocotyl contacted with the *Agrobacterium rhizogenes* in a media containing ¼ strength Murashige and Skoog media.

9. (original) The method of claim 8 wherein the media further comprises a selectable agent.

10. (original) The method of claim 9 wherein the selectable agent is kanamycin.

11. (previously presented) The method of claim 10 wherein the concentration of kanamycin in the media is no more than 50 mg/L.

12-26. (canceled)